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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/734,541	12/12/2003	Kenji Shiraishi	1536	9699

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EXAMINER

PHAM, MINH CHAU THI

ART UNIT	PAPER NUMBER
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1724

DATE MAILED: 07/26/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/734,541

Applicant(s)

SHIRAISHI ET AL.

Examiner

Minh-Chau T. Pham

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 May 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4, 6-11 and 13-18 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4, 6-11 and 13-18 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-4, 6-11, 13 and 14 are rejected under 35 U.S.C. 102(b) as being anticipated by Pieciak (4,156,601).

Pieciak teaches a gas filter comprising a cylindrical case and a filter element with a filtration portion formed to have a cylindrical shape (3) wherein a first filtration material made of boro silicate glass filter paper (6 in Fig. 1, col. 1, line 62 through col. 2, line 12, col. 2, lines 31-55) wrapped around the cylindrical support (4), and a second filtration material made of nonwoven fabric such as polyester nonwoven felt (7 in Fig. 1, col. 3, lines 10-17) .

Claim Rejections - 35 USC § 103

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 15-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pieciak (4,156,601), in view of Shimoda et al (6,585,794 B2).

Claims 15-18 call for the wetting ability wherein the second filtration material has a pore diameter larger than a pore diameter of the first filtration material to improve separation efficiency of oil mist from gas. Shimoda et al disclose a multilayered nonwoven filtration material (3) wherein the pore diameter of the second filtration

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material (2c) is larger than the pore diameter of the first filtration material (2b) or the larger pore diameter material is on the exit. It would have been obvious to a person having ordinary skill in the art at the time the invention was made to provide a filtration material with the wetting ability as taught by Shimoda et al in the filter apparatus of Pieciak since the larger diameter pore would not only improve efficiency of oil mist from gas but also improve corrosion resistance without compromising the performance of pressure loss.

Response to Amendment

Applicant's arguments filed on May 19, 2005 have been fully considered but they are not persuasive.

Applicant argues that none of the cited prior arts discloses the first filtration material as glass paper and the second filtration material as nonwoven material, as now claimed as filter materials. The Examiner now drops all the prior arts Head et al, Brownell and Kennedy and newly introduces Pieciak as the primary reference under the 102 rejection of claims 1-4m 6-11m 13 and 14 to show a gas filter comprising a cylindrical case and a filter element with a filtration portion formed to have a cylindrical shape (3) wherein a first filtration material made of boro silicate glass filter paper (6 in Fig. 1, col. 1, line 62 through col. 2, line 12, col. 2, lines 31-55) wrapped around the cylindrical support (4), and a second filtration material made of nonwoven fabric such as polyester nonwoven felt (7 in Fig. 1, col. 3, lines 10-17), as now claimed. The Examiner also newly introduces Shimoda et al as the secondary reference in combination with the primary reference Pieciak under the 103 rejection of claims 15-18 to show a multilayered

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nonwoven filtration material (3) wherein the pore diameter of the second filtration material (2c) is larger than the pore diameter of the first filtration material (2b) or the larger pore diameter material is on the exit, as claimed. It would have been obvious to a person having ordinary skill in the art at the time the invention was made to provide a filtration material with the wetting ability as taught by Shimoda et al in the filter apparatus of Pieciak since the larger diameter pore would not only improve efficiency of oil mist from gas but also improve corrosion resistance without compromising the performance of pressure loss.

Applicant's arguments with respect to claims 1-4, 6-11, 13 and 14-18 have been thoroughly considered but are moot in view of the new ground(s) of rejection.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Minh-Chau T. Pham whose telephone number is (571) 272-1163. The examiner can normally be reached on Mon/Tues/Thur/Fri 7:00 am - 5:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Duane Smith can be reached on (571) 272-1166. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Minh-Chau Pham
Patent Examiner
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July 22, 2005